Space & Missile Systems Center
Detachment 12
"The Dirty Dozen"

This Briefing is Classified:
Unclassified

Detachment 12 Mission & Vision

- **Mission**
  - **Detachment 12, Space and Missile Systems Center, serves as the primary provider of launch capability, space flight, and on-orbit operations demonstrating transformation technologies for the American warfighter**

Det 12 is assured access to space for the DoD RDT&E community

- **Vision**
  - **Smart, dedicated, energetic team of aerospace and support professionals providing recognized world-class leadership in the design, acquisition, launch, and operation of one-of-a-kind space and missile missions for DoD**

At Det 12, we don't make the payloads; we make the payloads fly

Detachment 12 Team

- 213-Person Government Organization (189 @ KAFB)
- $152M FY04 Budget [$71M is Customer Funding]
- 3 PMD Directed/Funded Missions Under SAF/USA
  - Rocket Systems Launch Program (RSLP)
    - Owns retired MM I/MM II rocket motors; Peacekeeper assets after deactivation; and provides launch services for DoD users
  - Space Test Program (STP)
    - Provides mission design studies, spacecraft/launch vehicle acquisition, and on-orbit operations for DoD experiments as required
  - R&D Space and Missile Operations (RDSMO)
    - Manages two R&D satellite operations complexes, the Camp Parks Communications Annex, and multiple deployable telemetry, tracking, and commanding (TT&C) terminals
    - Provides launch and on-orbit control of R&D space assets

RSLP, STP & RDSMO are "wholly-owned subsidiaries" of Det 12

Detachment 12 Team

Commander
Col James Neumeister
Det 12/CC

Acq. Logistics
GS-13 Dave Downs
Det 12/AL

Mission Support
Lt Col Santacrose
Det 12/MS

Financial Mgmt.
GS-14 Rick DeMello
Det 12/FM

Contracting
Lt Col Mike Ferris
Det 12/PK

RDSMO
Col Dennis Miller
Det 12/VO

STP
Col Rich White, Jr.
Det 12/ST

RSLP
Col Nat Thongchua
Det 12/RP

NORTHROP GRUMMAN
Dr Durand Smith

LOCKHEED MARTIN
Mr Phil Shiver

NORTHROP GRUMMAN
Mr Ron Miller

Mr Mike Mahoney

Mr Steve Hogan

Mr Phil Vitale

Dr Victor Matricardi

Ms Teresa Freund

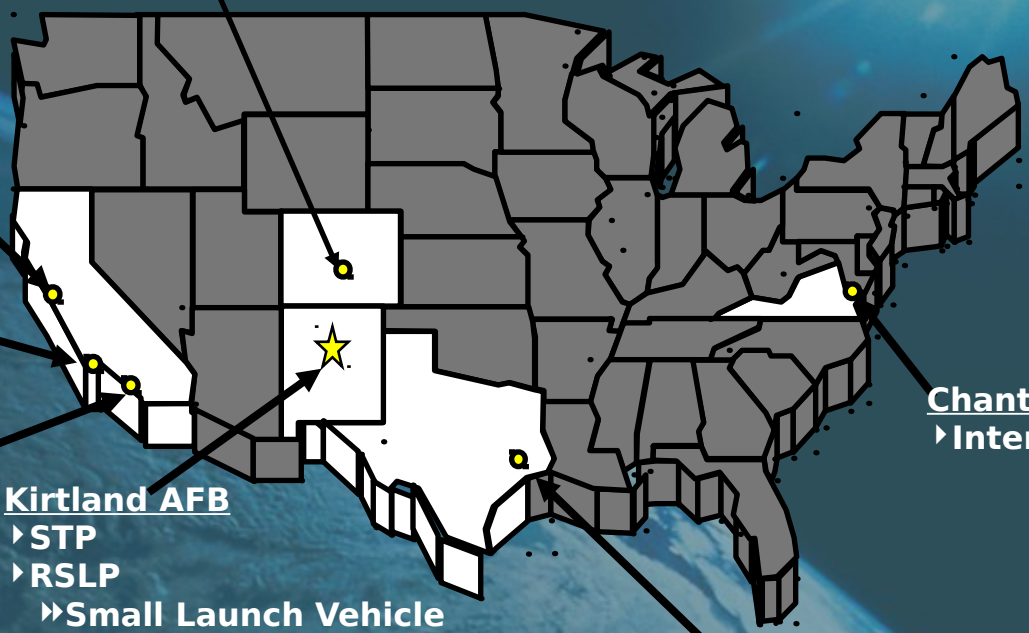
EDSI
Mr Jon Romero

Detachment 12 Locations

Schriever AFB
- Center for Research Support (CERES) at the Joint National Integration Center

Camp Parks Comm Annex
- Fixed Antenna Site

Vandenberg AFB
- 30 LG Liaison



Chantilly, VA
- Inter-Range Ops

Los Angeles AFB
- SMC Sys Acq Liaison
- SPO Test Support

Kirtland AFB
- STP
- RSLP
  - Small Launch Vehicle
  - Missile Deactivation
  - Sub-orbital Launch
- RDSMO
  - RDT&E Support Complex
  - Deployable TT&C Systems
- Space-Based Laser (SBL) Program
- Space Single-Face-To-Customer (SFTC)
- T&E APDP Functional Manager

NASA Johnson Space Center
- Shuttle Experiment Planning & Integration
- ISS Experiment Planning & Integration

Space Capabilities CONOPS

Operational System

- $100Ms - $1Bs
- Traditional SPOs

Warfighter Needs

- Technology Needs
- System Deficiencies
- Doctrine

- $100Ks - $10Ms
- RSLP, STP, RDSMC
- CONOPS
- Tactics, Techniques, Procedures

Test & Evaluation

- NRL
- AFRL
- MDA
- DARPA

Technology Development

Det 12 does the "hands-on" demonstration of transformation

SMC Detachment 12 - “The Dirty Dozen”

Detachment 12/PK Contracting

Overview

Lt Col Mike Ferris
Director, Contracting

Contracting Organization

Det 12/PK

Det 12/PKN

Det 12/PKT

Det 12/PKS

Det 12/PKV

SMC Det 12/PK

Organizational Chart

What We Buy

- Rocket Systems Launch Program
  - Launch vehicles and services
  - Aging and Surveillance of Minuteman Boosters
  - Asset storage
  - Significant support to Missile Defense Agency
- Space Test Program
  - Spacecraft design, build, integration and test
  - Payload integration & operation into Space Shuttle/ International Space Station missions
- Space Vehicle Operations
  - Engineering, development, maintenance & sustainment support RSC, CERES and Deployable Systems
  - Telemetry, tracking & control of R&D satellites & boosters

Primary Contractors

RSLP

Orbital Sciences Corporation
Northrop-Grumman
Lockheed-Martin
Coleman Research Corp.
McCormick-Selph
Aerojet
Alliant Technologies
Space Vector, Inc.

STP

Spectrum Astro
AeroAstro (SB)
Boeing
Muniz Engineering (8a)
Surrey Satellite Technologies

RDSMO

Lockheed-Martin

Northrop-Grumman

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Rocket Systems Launch Program

Overview

Ken West and ???????
Chief of Contracting (PKS and PKN)

RSLP Keystones

Launch Vehicle Contracts

Orbital/Suborbital Program (OSC

- Space Launch Vehicle
- GMD Target Launch Vehicle

Sounding Rocket Program (OSC, Coleman, Space Vector, LMA)

Long Range Air Launch Target (Coleman)

RANGES

- Vandenberg AFB,
- Kwajalein, Wake Is.,
- White Sands, etc.

Commercial Spaceports

- Alaska Aerospace Development Corp (Kodiak)
- Florida Space Authority (Cape Canaveral)
- Virginia Space Flight Center (Wallops VA)
- Spaceport Systems International (Vandenberg AFB)

Missile Storage

- Camp Navajo, AZ
- Freeport (GSA Facility)
- Hawthorne, etc.
- Boeing: Inventory

Aging Surveillance

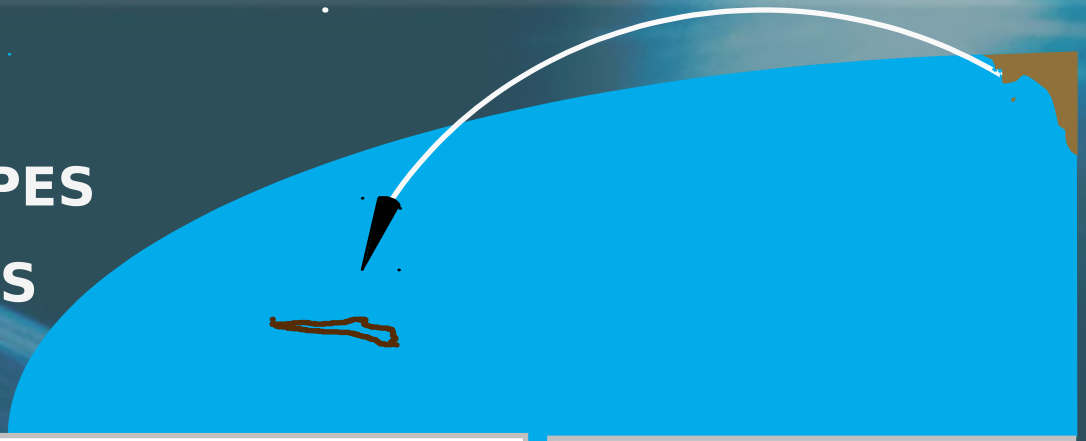
- ATK (MMII, Stg 1 & 3)
- Aerojet (MMII, Stg 2)
- Northrop Grumman (Tech Spt)

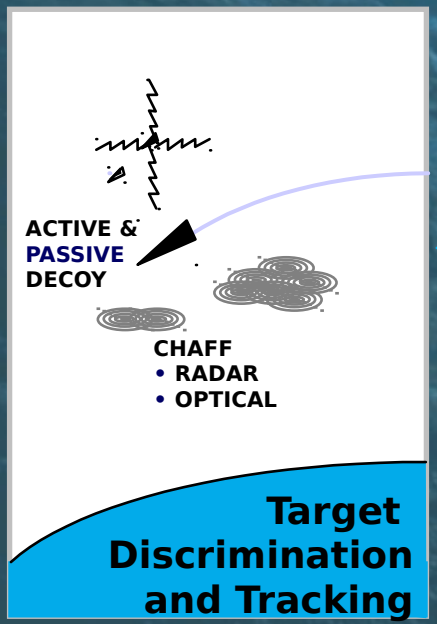
Booster Refurb

- Ogden ALC
- Northrop Grumman

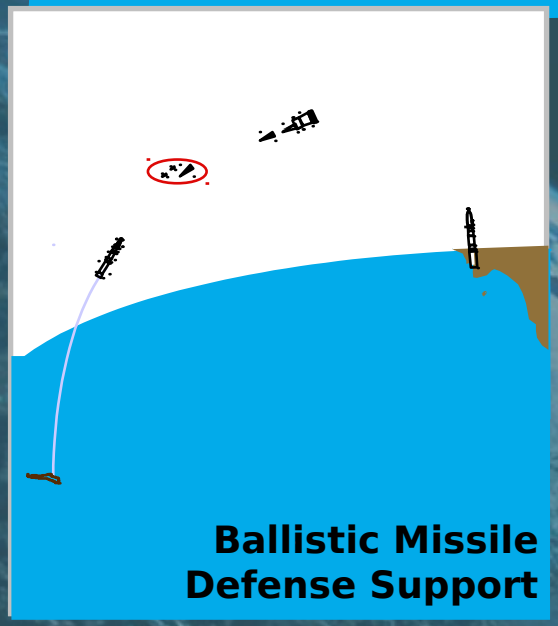
RSLP Legacy

- 658 LAUNCHES
- 26 BOOSTER TYPES
- 22 LAUNCH SITES





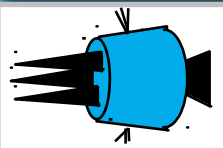
PENETRATION AIDS



MISSILE DEFENSE TARGETS

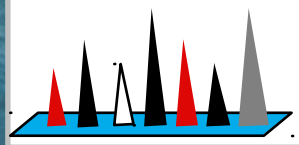
Mark 11, 12/12a
Mark 17, 18, 21
Maneuvering RVs

REENTRY SYSTEMS



- Minuteman III / Small ICBM
- GPS Tracking

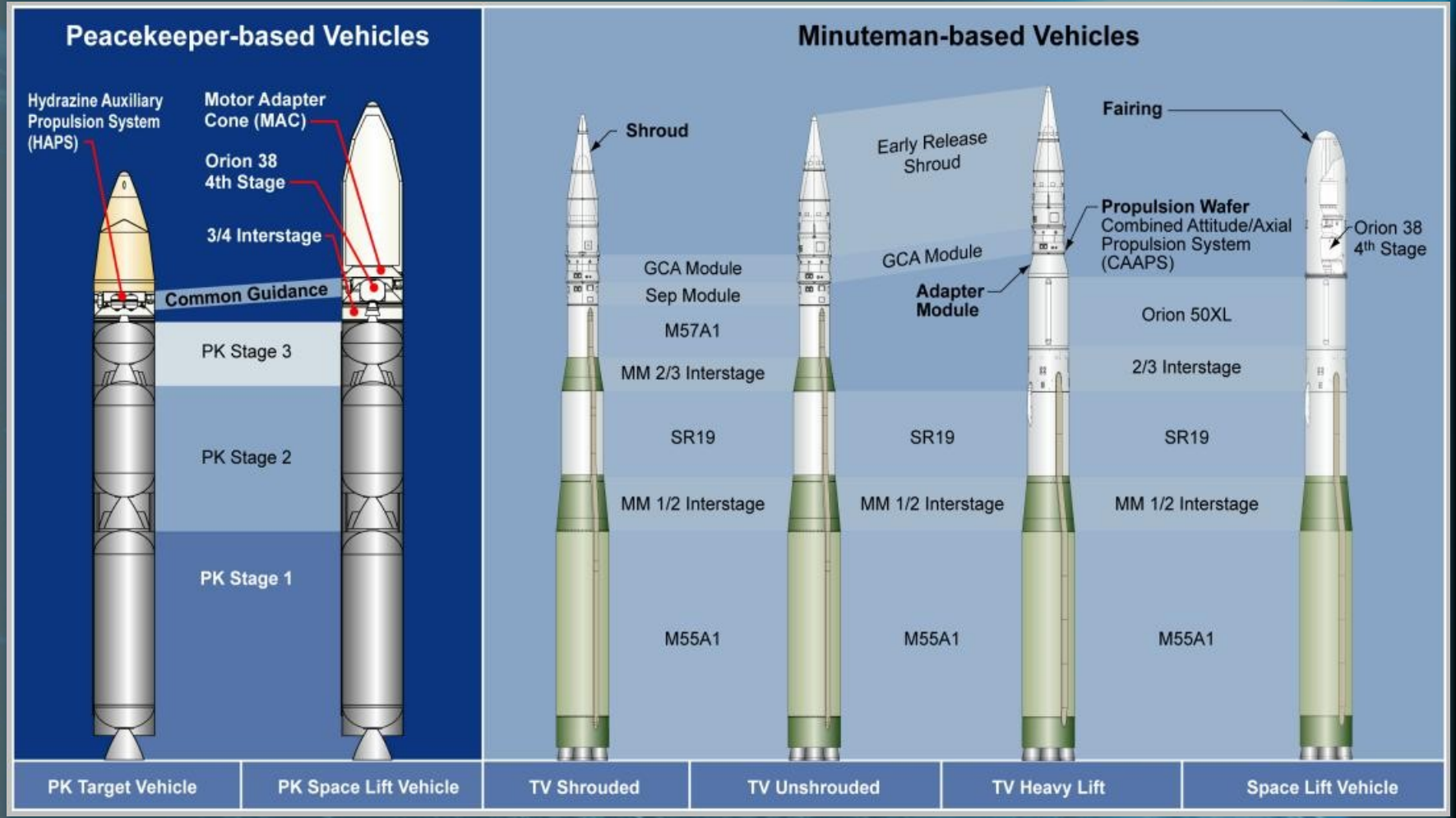
GUIDANCE & NAVIGATION



- Fuzing
- Nosetips
- GPS Tracking

SPECIAL FLIGHT TEST PROJECTS

OSP-2 Launch Vehicles



Launch Sites

POKER FLATS ALASKA
- HAVE SLED I
- HAVE SLED II

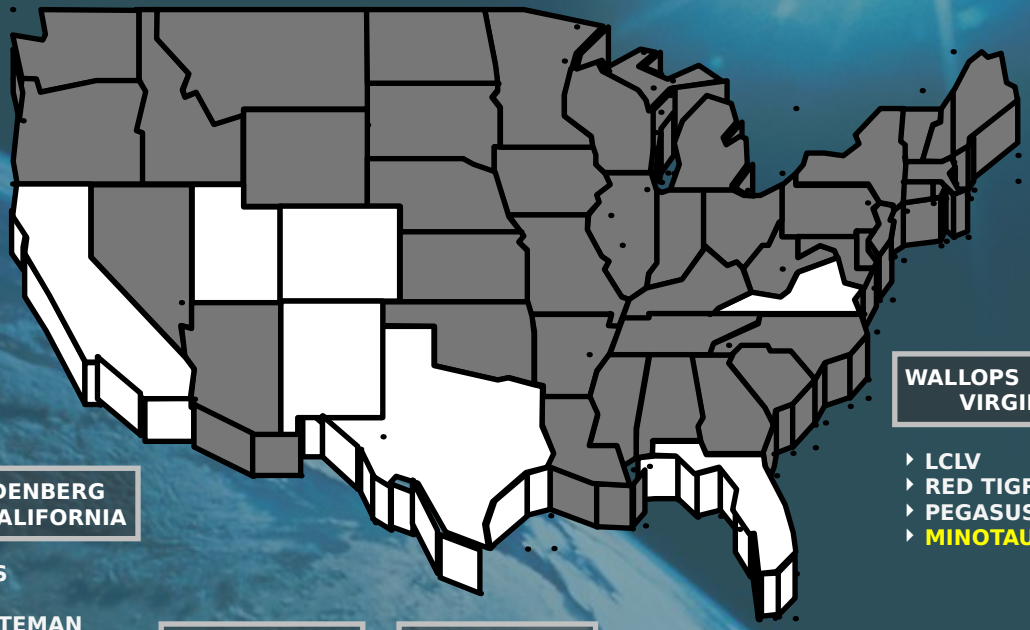
KODIAK ISLAND ALASKA
- ait-1, 2,
- QRLV-1, -2

BARKING SANDS KAUAI
- HAVE LIST
- NTW / AEGIS BMD

WAKE ISLAND
- TCMP I, II, III

KWAJALEIN ATOLL
- HAVE JEEP VI
- HAVE JEEP VII
- GBI

GREEN RIVER UTAH
- ATHENA



VANDENBERG AFB CALIFORNIA
- ATLAS
- THOR
- MINUTEMAN
- TITAN
- PEGASUS
- TAURUS
- MINOTAUR

FORT WINGATE NEW MEXICO
- STORM
- HERA

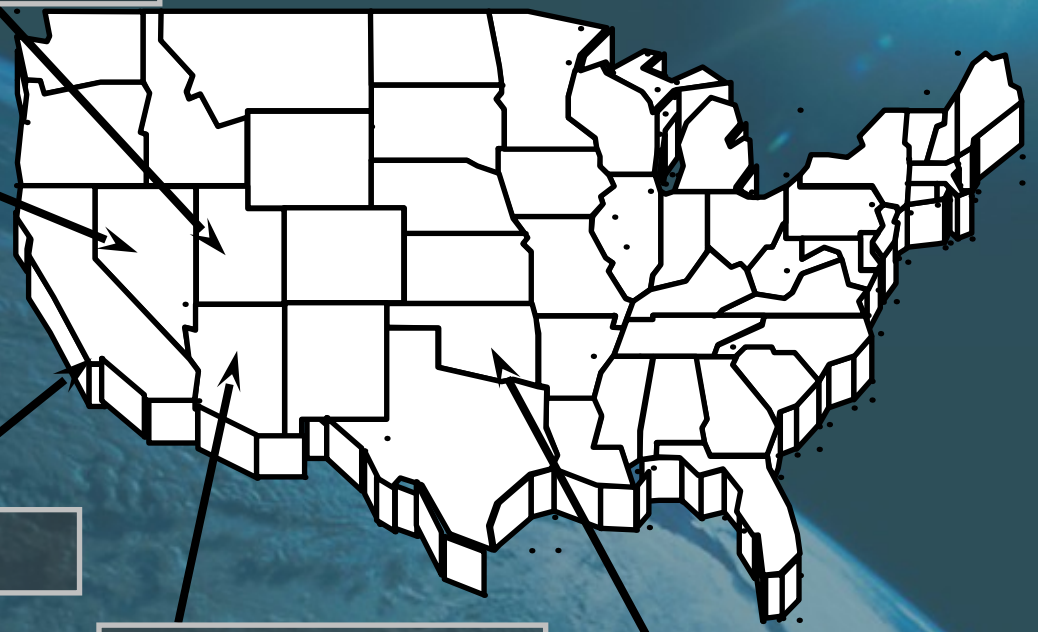
WHITE SANDS NEW MEXICO
- STORM
- HERA
- LEAP
- HIGH GEAR
- BALLOONS
- SCORPIUS

WALLOPS ISLAND VIRGINIA
- LCLV
- RED TIGRESS III
- PEGASUS
- MINOTAUR

CCAFS FLORIDA
- RED TIGRESS I
- RED TIGRESS II
- STARBIRD
- ASAS

RSLP Motor Storage

**1400 Motors in storage – $1.5B acq cost *
28K Components – $281M acq cost**



Freeport Center (14K – Components)
Hill AFB (91 Motors)
OASSIS (135 Motors)

Hawthorn AD (204 Motors)

Vandenberg AFB (6K Components)

Camp Navajo AD (925 – Motors; 4K Components)

McAlester (76 Motors)

*Does not include 320 Peacekeeper motors with associated component assets

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Department of Defense Space Test Program

Overview

Odette Denman
Chief of Contracts (PKT)

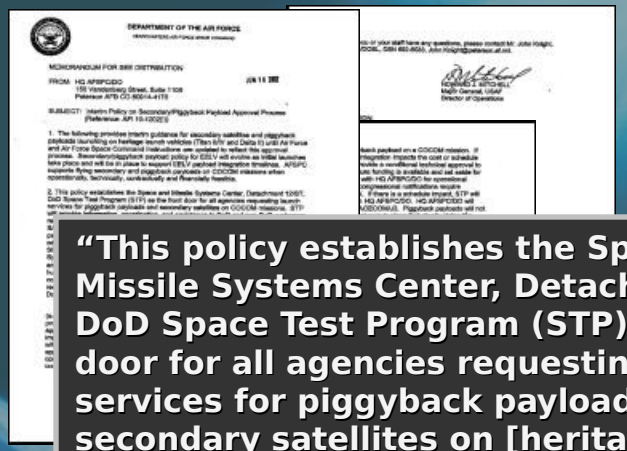
Space Test Program Mission

STP serves as the primary provider of spaceflight for the entire DoD space science and technology community

STP is a DoD Program; USAF is the Executive Agent

DoD "Auxiliary" Payload Policy

- AFSPC policy establishes STP as the "front door" for all auxiliary payloads on heritage launch vehicles
- EELV Program Office and DoD STP are jointly developing Auxiliary Payload Policy for EELV missions
  - Designates STP as "one-stop shop" for RDT&E spaceflight manifest for EELVs as well
- DoD STP currently working to develop a standardized secondary payload process



"This policy establishes the Space and Missile Systems Center, Detachment 12/ST, DoD Space Test Program (STP) as the front door for all agencies requesting launch services for piggyback payloads and secondary satellites on [heritage launch vehicle] COCOM missions."

AFSPC/DO
18 Jun 02

"For those experiments that cannot be accommodated by secondary opportunities, STP provides a dedicated spacecraft and launch either as a primary or secondary payload on an expendable launch vehicle."

Deputy SECDEF
8 Jul 02

STP Organization

Program Director
Col Rich White

Deputy Program Director
LtCol Dan Griffith

Contracting
Ms Odette Denman

Program Control
Ms Charlene Dutchman

Mr Chris Olmedo
Army Liaison Officer
SMC Det 12/STX

LCDR Todd Sitler
Navy Liaison Officer
SMC Det 12/STX

Dr Victor Matricardi
Principal Director
ace Test & Experimentation

Mission Design
Lt Col Taylor Locker

- SERB Liaison
- Requirements Identification
- Mission Design
- Auxiliary Payload Execution
- Conference Liaison
- Services Liaison

Spaceflight Acquisition
Maj Randy "Jack" Ripley

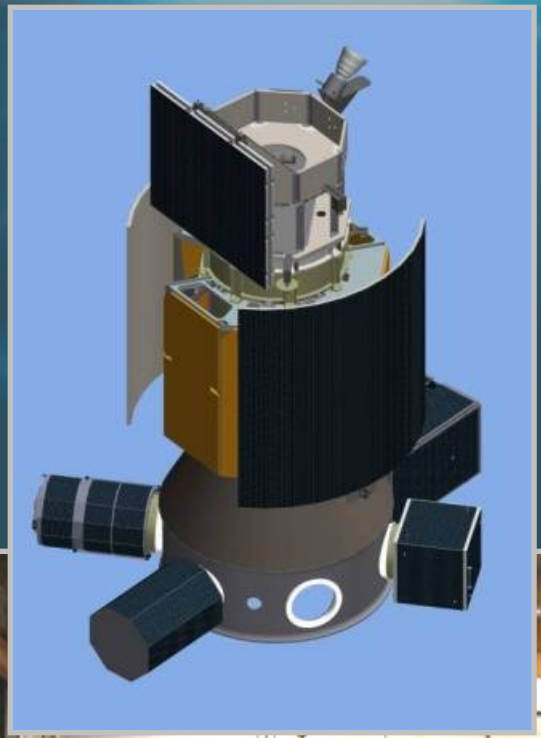
- Mission Planning
- Spacecraft Procurement
- Launch Vehicle Procurement
- Payload Integration & Test
- Mission Operations

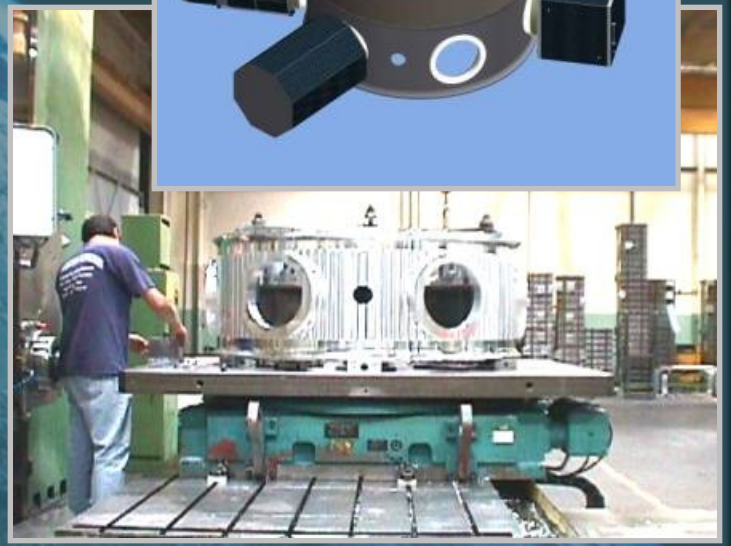
Shuttle/ISS
Mr David Hess

- DoD Access to Shuttle & ISS
- Manned Spaceflight Operations
- Payload Integration
- Astronaut Crew Training
- On-orbit Payload Operations

EELV Secondary Payload Adapter

- ESPA will be the US's first "normalized" secondary payload capability
  - Fits any EELV-M
  - Prime payload interface the same
  - Holds up to six 400lb satellites
- STP-AFRL building a National capability
  - Funded "out of hide", but expect entire space community to benefit
- First flight Sep 06 on STP-1





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Research & Developme
Space & Missile Operations (RDSMO)

Overview

Maj Jim Eastman
Chief of Contracting (PKV)

Camp Parks Communication

Fixed Antenna Site

- Range Of Frequencies/Data Rates
  - SGLS/SHF, UHF, X-band, L-band
- Supports On-Orbit
  - Calibration
  - Testing
  - Anomaly Resolution
  - Routine Operations

Center for Research Support (CERES)

Space Operations Test Bed

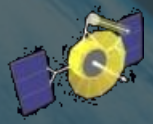
- Rapid Capabilities of
  - Prototyping
  - Evaluation
  - Activation
- 24/7 Access to Ground/Space Assets
- Residual Satellite Operations

DMSP

DSCS III

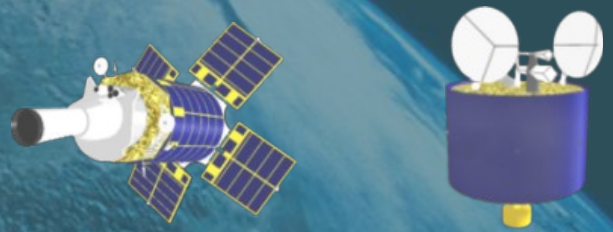
DSP

DSCS II


FLTSAT

CERES

- **Command & Control System – Consolidated (CCS-C)**
  - **Completed vendor “fly-off” for down-select**
  - **Will replace aging MILSATCOM CCS**
- **Defensive Counter-Space Test Bed (DTB)**
  - **Utilize neural network to create “satellite-as-a-sensor” environment**
  - **Demonstrated real-time attack and anomaly detection via DSP12 telemetry**

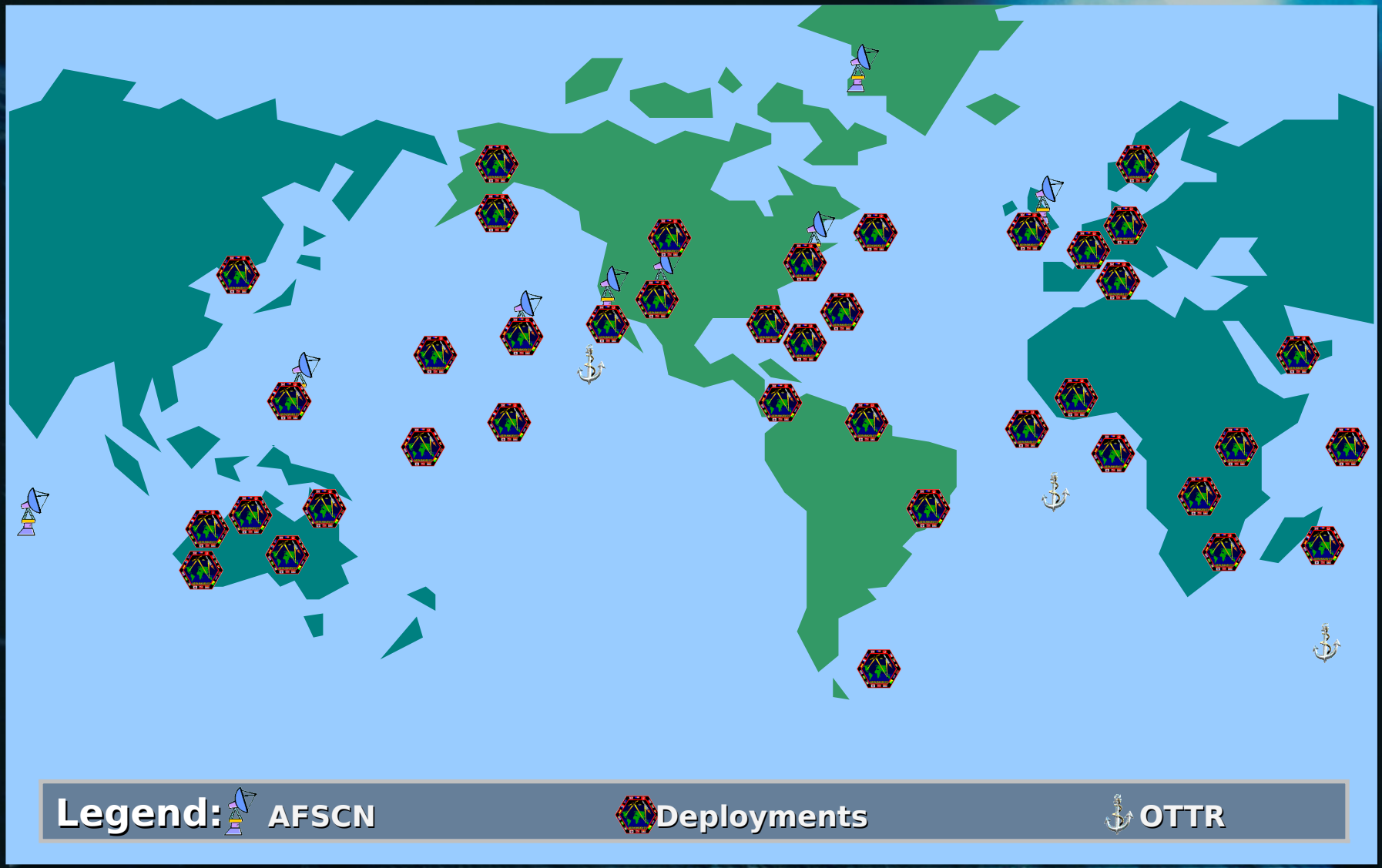


Deployable Test Systems

Deployable Antenna Unit

- Worldwide TT&C Relay Support
  - Land- or Sea-based
- Range of Frequencies/Data Rates
  - SGLS, USB
- Supports Critical Events
  - Launch & Stage Separations
  - Satellite Factory Compatibility
  - Anomalies

Deployable Test Systems



Deployable Test Systems

Deployables' Ocean-Going Transportable Test & Evaluation Resource (OTTR) aboard the OSA Valiant

Waves crash aboard the ship used by Deployables during another OTTR mission

RDT&E Support Complex

Satellite Operations Center

- Manages and Supports RDT&E missions from inception through end of life
- Mission planning: orbit dynamics, scheduling, command generation
- Mission data archival & distribution
- Satellite TT&C
  - Telemetry processing, analysis, display, trending

TEX

RADCAL

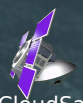
POAM III

TSX-5

Coriolis

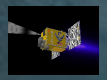
MSTRS

XSS-10


CloudSat

STPSat 1

C/NOFS


XSS-11

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